

THAT WHICH IS CLAIMED IS:

1. A hybrid or alternatively only thermal or only electrical propulsion, comprising an internal combustion engine, an electrical motor and at least one transmission to one or more drive wheels of the vehicle, at least a rechargeable battery, a power circuitry for driving multiple phase windings of the electrical motor drawing energy from said battery and for recharging said battery, and an electronic torque management unit for controlling the hybrid and/or the exclusive functioning of said engine and said motor for generating the required torque, characterized in that

said electrical motor is a reversible electrical machine, the ferromagnetic pack of which constituting the stator of the machine is mounted on the axle of at least a wheel of the vehicle and the rotor of which is installed inside the hub of the wheel.

2. The vehicle according to claim 1, characterized in that it is a motorcycle and said reversible electrical machine is in the front wheel.

3. The vehicle according to claim 1, characterized in that said reversible electrical machine has a permanent magnet rotor.

4. The vehicle according to claim 3, characterized in that said permanent magnet rotor includes a sintered drum of magnetic material, permanently magnetized per longitudinal bands defining a plurality of magnetic poles of alternate polarity

around a circumference.

5. The vehicle according to claim 1, characterized in that terminals of said power circuitry are wired to said phase windings of the machine and said electrical control unit automatically configures said terminals as the output terminals of a phase winding driving circuit and as the input terminals of a battery charger circuit of said power circuitry.